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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/652,749	08/29/2003	Hiroaki Shiraishi	4041J-000762	1754

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HARNESS, DICKEY & PIERCE, P.L.C.  
P.O. BOX 828  
BLOOMFIELD HILLS, MI 48303

EXAMINER

FORD, JOHN K

ART UNIT	PAPER NUMBER
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3753

DATE MAILED: 01/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/652,749

Applicant(s)

SHIRAIISHI ET AL.

Examiner

John K. Ford

Art Unit

3753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 9-28-04
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 3, 8, 9, and 12-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4, 5, 10, 11, 15 and 16 is/are rejected.
- 7) ☒ Claim(s) 6, 7 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 8/29/03 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 8/29/03
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

Applicant's election of the first species of Figures 1-10, without traverse, is acknowledged. Claims 1, 2, 4-7, 10, 11, 15 and 16 have been identified as readable on the elected species.

Claims 3, 8, 9 and 12-14 are withdrawn at this time.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4, 5, 10, 11, 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combined teachings of Baker et al. (USP 6,123,267) and Baker (USP 6,224,478).

Baker '267 is discussed on page 1, line 27 – page 3, line 14 of applicant's specification and that discussion is incorporated here by reference. As pointed out in that discussion, switching directly from the foot mode to the bi-level mode is perceived as uncomfortable by the occupants.

A very similar discussion to applicants' occurs in Baker '478 wherein major airflow direction changes are deemed unpleasant (see col. 1, lines 25-27). To reduce the feeling of unpleasantness, Baker proposes in Fig. 4 dividing the bi-level modes between a face and foot mode into a whole series small incremental changes in the bi-level mode. Comparing Figure 2 and Figure 4, of Baker one of ordinary skill in the art is clearly taught that in the vicinity of the bi-level mode and the foot mode at least three steps (B/L6, B/L7 and B/L8) can be used to make the transition between bi-level and foot level less abrupt and hence less unpleasant.

To have used the just described steps B/L6, B/L7 and B/L8 in place of the single abrupt foot to bi-level change discussed by applicant in regard to Baker et al '267 would have been obvious to improve occupant comfort.

In regard to the fact that Baker et al '267 discloses a linear bi-level mode that is approximated by a "stair-case" of intermediate values, applicant should note that his disclosure in Figure 13 (non-elected at present) encompasses this variant (and counsel has indicated that at least claim 16 is generic to all embodiments of applicant's device including applicant's Figure 13).

Regarding claim 4, as disclosed on page 2, lines 23-27 of applicant's specification, in regard to the prior art, there is another abrupt transition between bi-level and foot mode once the water is warmed up. Applying the same teaching of Baker et al '478 to that transition would lead to the obviousness of making it more gradual for the same reasons as discussed above in regard to the foot to bi-level transition (i.e. to improve occupant comfort by eliminating abrupt transitions by substituting gradual ones instead).

Regarding claims 5, 11 and 15, Baker '267 discloses a timer to keep the system in a bi-level mode for a predetermined time (which time is a function of outdoor temperature and sunlight).


Claims 1, 2, 4, 5, 10, 11, 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art as applied to claim 1 above, and further in view of JP 58-128917.

JP' 917 teaches the same idea of changing the opening between the vent bi-level and foot levels gradually to avoid occupant discomfort. This reference reinforces the aforementioned combined teachings of the two Baker references.

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Claims 6 and 7 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication should be directed to John Ford at telephone number (571) 272-4911.



**John K. Ford**  
**Primary Examiner**